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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
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DENNIS R. HOERNER, JR.
MONSANTO COMPANY, EE4F
700 CHESTERFIELD VILLAGE PARKWAY
ST. LOUIS, MO 63198

EXAMINER	
FOX, D	
ART UNIT	PAPER NUMBER
184	2

DATE MAILED:

07/27/89

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

- ☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☒ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449
4. ☐ Notice of informal Patent Application, Form PTO-152
5. ☒ Information on How to Effect Drawing Changes, PTO-1474
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-18 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-18 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☒ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☒ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☒ not been received
☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 184.

Claims 7, 10, 13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7 and 16 are indefinite in their recitation of "by steps" as it is unclear what Applicants intend. Claim 10 is indefinite in its recitation of "region of homology" which fails to specify the object of homology which is being compared. Claim 13 is indefinite in its recitation of "modified" which fails to clearly characterize the claimed plasmid.

Claim 10 is rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited to a plant transformation plasmid comprising the right T-DNA border, as per pages 9-28 of the specification. See MPEP 706.03(n) and 706.03(z). Since it is well known in the art that the right T-DNA border is required for exogenous gene incorporation, undue experimentation would be required by one^{of} ordinary skill in the art to obtain stable foreign gene incorporation not utilizing the right border.

Claims 16-18 are rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited to transformed dicots, as per pages 9-28 of the specification. See MPEP 706.03(n) and 706.03(z). Given the recalcitrance of transformed monocot cells to plant regeneration (see, e.g., Goodman et al., page 52) undue experimentation would be required by one of ordinary skill in the art to obtain whole plant regeneration of transformed monocot cells.

Claims 1, 4, 7, 10, 13 and 16 are rejected under 35 U.S.C. 112, first paragraph, as the disclosure is enabling only for claims limited to the CaMV 19S and 35S promoters, as per pages 9-28 of the specification. See MPEP 706.03(n) and 706.03(z). Given the unpredictability inherent in exogenous gene expression in plants, undue experimentation would be required by one of ordinary skill in the art to isolate other non-exemplified CaMV promoters and evaluate their utility in exogenous gene expression in plants.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claims 1-15 are rejected under 35 U.S.C. 103 as being unpatentable over Anderson taken with Guilley et al. Anderson teaches plant cells transformed with DNA constructs comprising a viral promoter, a gene encoding the kanamycin resistance enzyme, portions of the CaMV genome, and T-DNA borders (see, e.g., column 5, lines 1-10, 22-25, 30-68). Anderson does not teach exogenous gene expression driven by the CaMV 35S or 19S promoters.

Guilley et al. teaches the identification of the CaMV 35S and 19S promoters and also teaches their strength (see, e.g., pages 769-770). It would have been obvious to one of ordinary skill in the art to utilize the method of T-DNA mediated plant transformation utilizing viral promoters as taught by Anderson and to incorporate the strong CaMV 35S and 19S promoters taught by Guilley et al., since each would continue to function in its known and expected manner. Thus, the claimed invention was clearly prima facie obvious as a whole to one of ordinary skill in the art at the time it was made, especially in the absence of evidence to the contrary.

Claims 16-18 are rejected under 35 U.S.C. 103 as being unpatentable over Anderson taken with Guilley et al as applied to claims 1-15 above, and further in view of Zambryski et al. Anderson taken with Guilley et al. teaches a method for plant cell transformation utilizing the CaMV 19S and 35S promoters as discussed supra, but does not teach the regeneration^e of whole plants from transformed cells. Anderson also teaches the utility of a vector with deleted tumor genes (see, e.g., column 4, lines 39-45). Zambryski et al. teaches the regeneration of whole plants from cells transformed with a vector containingⁿ chimeric genes, T-DNA borders and deleted tumor genes (see, e.g., page 2145, column 1,

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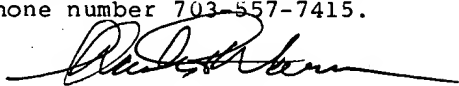
third full paragraph, paragraph bridging columns 1 and 2). It would have been obvious to one of ordinary skill in the art to utilize the disarmed plant transformation construct taught by Anderson taken with Guilley et al. and to obtain regenerated transformed plants as taught by Zambryski et al. Thus, the claimed invention was clearly prima facie obvious as a whole to one of ordinary skill in the art at the time it was made, especially in the absence of evidence to the contrary.

No claim is allowed.

Any inquiry concerning this communication should be directed to David Fox at telephone number 703-557-7415.

DF
Fox: def

7/24/89


CHARLES F. WARREN
SUPERVISORY PATENT EXAMINER
GROUP ART UNIT-124
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